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E OF INVENTION: CONTAINER WITH CLOSURE DEVICE AND MULTIPLE SIDE SEALS

LICANT(S) FOR DO/US: THE GLAD PRODUCTS COMPANY; Alan, F. Savicki, Sr.

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ATTENTION: DO/US

Applicant herewith submits to the United States Designated Office (DO/US) the following items er 35 U.S.C. Section 371:

s express request to immediately begin national examination procedures (35 U.S.C. Section 371(f)).
U.S. National Fee (U.S C. Section 371(c)(1)) and other fees (37 C.F.R. Section 1.492), as indicated)w:

Fees

.AIMS E*	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULA-TIONS
	TOTAL CLAIMS	30 -20 =	0	x $18 00 =	$36 00
	INDEPENDENT CLAIMS	2 - 3 =	0	x $80 00 =	$0 00
	MULTIPLE DEPENDENT CLAIM(S) (if applicable) + $270				$0 00
ASIC FEE	The international search fee, as set forth in Section 1.445(a)(2) to be paid to the US PTO acting as an international Searching Authority has been paid (37 CFR 1 492(a)(2)) $710 00				$746 00
	Total of above Calculations				= $746 00
MALL NTITY	Reduction by 1/2 for filing by small entity, if applicable Affidavit must be filed (note 37 CFR 1.9, 1 27, 1.28).				- $0 00
	Subtotal				$746 00
	Total National Fee				$746 00
	Fee for recording the enclosed assignment document $40 00 (37 CFR 1 21(h)) (See Item below) See attached "ASSIGNMENT COVER SHEET"				$40 00
)TAL	Total Fees enclosed				$786 00

Please charge Account No. 03 2270 in the amount of $786 00.
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A copy of the International application as filed (35 U.S.C. Section 371(c)(2)) is transmitted :with.

A translation of the International application into the English language (35 U.S.C. Section (c)(2)) is not required as the application was filed in English.

An oath or declaration, including power of attorney, of the inventor (35 U.S.C. Section (c)(4)) complying with 35 U.S.C. Section 115 is enclosed.

Other document(s) or information included:

An international Search Report or Declaration under PCT Article 17(2)(a) is transmitted ewith.

An Information Disclosure Statement under 37 C.F.R. Sections 1.97 and 1.98 is transmitted ewith. Also transmitted herewith is (are) Form PTO-1449 (PTO/SB/08A and 08B), and copies of tions listed.

An assignment document is transmitted herewith for recording. A separate FORM PTO-1595 is attached. Please mail the recorded assignment document to the person whose signature and address ears below.

Additional documents:

Copy of request (PCT/RO/101)

International Publication No. WO 01/94224

Specification, claims and drawing

The above checked items are being transmitted after publication and the article 20 nmunication, but before 20 months from the priority date.

THORIZATION TO CHARGE ADDITIONAL FEES

The Commissioner is hereby authorized to charge the following additional fees that may be ired by this paper and during the entire pendency of this application to Account No. 03 2270.

37 C.F.R. Section 1.492(a)(1), (2), (3), and (4) (filing fees)

37 C.F.R. Section 1.492(b), (c), and (d) (presentation of extra claims)

37 C.F.R. Section 1.17 (application processing fees)

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CONTAINER WITH CLOSURE DEVICE AND MULTIPLE SIDE SEALS

FIELD OF THE INVENTION

The present invention relates generally to containers and, more particularly, to multiple side seals used with a closure device. The invention is particularly well suited for use on flexible storage containers, including plastic bags.

BACKGROUND OF THE INVENTION

The use of closure devices for fastening storage containers, including plastic bags, is generally known. Furthermore, the manufacture of closure devices made of plastic materials is generally known to those skilled in the art, as demonstrated by the numerous patents in this area.

A particularly well-known use for closure devices is in connection with flexible storage containers, such as plastic bags. In some instances, the closure device and the associated container are formed from thermoplastic materials, and the closure device and the sidewalls of the container are integrally formed by extrusion as a single piece. Alternatively, the closure device and sidewalls of the container may be formed as separate pieces and then connected by heat sealing or any other suitable connecting process. In either event, such closure devices are particularly useful in providing a closure means for retaining matter within the bag.

Conventional closure devices typically utilize mating fastening strips or closure elements, which are used to selectively seal the bag. A slider may be provided for use in opening and closing the fastening strips. Some of these sliders may include a separator which extends at least partially between the fastening strips. When the slider is moved in the appropriate direction, the separator divides the fastening strips and opens the bag.

Plastic bags may have a side seal on each side to hold the side walls together. One problem that has been overlooked by the prior art is the chance that the single side seal may not be able to fully hold the plastic bag together under certain instances. In particular, the sidewalls of the plastic container may be forced apart from each other. This situation can happen in such cases where the bag may accidentally be dropped or if something of significant weight were to be dropped on top of the bag. This situation is particularly a problem when the bag is storing a liquid and the liquid will leak out of the broken side seal. In addition, an unnoticed gap in the sidewalls would allow the bag to communicate air which could cause premature spoilage of the food. Furthermore, where the gap is noticed, the bag would have to be discarded.

SUMMARY OF THE INVENTION

According to the teachings of the present invention, the container includes sidewalls, side seals, and a closure device. The side seals are used to securely fasten edges of the sidewalls together. The closure device includes interlocking fastening strips disposed along respective edge portions of the opposing sidewalls. The closure device may

also include a slider slidably disposed on the interlocking fastening strips for facilitating the occlusion and deocclusion of the fastening strips when moved towards first and second ends of the fastening strips.

The side seals may be created by heat sealing, ultrasonic sealing or an adhesive that attaches the sidewalls of the storage container together.

These and other objects, features, and advantages of the present invention will become more readily apparent upon reading the following detailed description of exemplified embodiments and upon reference to the accompanying drawings herein.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a container according to the present invention in the form of a plastic bag;

Fig. 2 is a front view of the container in Fig. 1;

Fig. 3 is a cross-sectional view taken along line 3-3 in Fig. 2;

Fig. 4 is a front view of another embodiment of the container;

Fig. 5 is a cross-sectional view taken along line 5-5 in Fig. 4;

Fig. 6 is a cross-sectional view taken along line 6-6 in Fig. 4;

Fig. 7 is a cross-sectional view of another embodiment;

Fig. 8 is a cross-sectional view of another embodiment; and

Fig. 9 is a cross-sectional view of another embodiment.

DESCRIPTION OF THE EMBODIMENTS

Figs. 1-3 illustrate an embodiment of a container 100 in the form of a plastic bag 120 having a sealable closure device 121.

The bag 120 includes a first sidewall 122 and a second sidewall 123 joined at a first side seal 124 and a second side seal 125 to define a compartment accessible through the open top end but sealable by means of the closure device 121. The first sidewall 122 and the second sidewall 123 are additionally joined by a third and fourth side seals 126, 127. The third seal 126 is parallel to and in close proximity to the first seal 124. Likewise, the fourth seal 127 is parallel to and in close proximity to the second seal 125. The third and fourth seals 126, 127 assist the first and second seals 124, 125 in joining the first and second sidewalls 122, 123.

The closure device 121 includes first and second fastening strips 130, 131 and a slider 132. The fastening strips 130, 131 and the slider 132 have a longitudinal X axis 102, a transverse Y axis 104 and a vertical Z axis 106. The transverse Y axis 104 is perpendicular to the longitudinal X axis 102. The vertical Z axis 106 is perpendicular to the longitudinal X axis 102 and the

vertical Z axis 106 is perpendicular to the transverse Y axis 104.

The first fastening strip 130 is attached to the first sidewall 122 near the top end of the bag 120. The second fastening strip 131 is attached to the second sidewall 123 near the top end of the bag 120. The fastening strips 130, 131 are located across from and substantially parallel to each other and are configured to allow the fastening strips 130, 131 to be able to interlock. The slider 132 is mounted onto the fastening strips 130, 131 so that the slider 132 is restrained from being removed from the fastening strips 130, 131 but free to slide along the X axis 102. The slider 132 engages the fastening strips 130, 131 so that when the slider 132 moves in an occlusion direction 114, the fastening strips 130, 131 interlock and the bag 120 is sealed, and when the slider 132 moves in a deocclusion direction 116, the fastening strips 130, 131 separate and the bag 120 is open.

Fig. 3 depicts a cross-section of the container in Fig. 1 and illustrates the first and third side seals 124, 126. The first side seal 124 is disposed along the edge of the sidewalls 122, 123. The third side seal 126 is disposed in close proximity to the first side seal 124. The first and third side seals are disposed parallel to the vertical Z axis 106. There exists a small gap 128 between the first and third side seals. The second and fourth side seals 125, 127 may have a similar construction.

Figs. 4-5 depict another embodiment of the container 200 and illustrate first side seal 224, second side seal 225, third side seal 226, fourth side seal 227, fifth side

seal 228 and sixth side seal 229. The third and fifth side seals 226, 228 are parallel to and in close proximity to the first side seal 224. Likewise, the fourth and sixth side seals 227, 229 are parallel to and in close proximity to the second seal 225.

Fig. 5 depicts a partial cross-sectional view of the container in Fig. 4, along line 5-5 in Fig. 4, and illustrates the first, third, and fifth side seals 224, 226, 228. Referring to Figs. 5 and 6, the first side seal 224 is disposed along the edge of the sidewalls. The third and fifth side seals 226, 228 are disposed in close proximity to the first side seal 224. The first, third, and fifth side seals 224, 226, 228 are parallel to the vertical Z axis 106. There exist small gaps 240, 242, 244, 246 between the side seals.

In other embodiments, the container may include four, five or more side seals next to the first side seal and/or the second side seal.

The side seals may be manufactured by heat sealing, ultrasonic sealing, or adhesives that attach the sidewalls together. The additional side seals, such as, the third and fourth seals, may be formed at the same time as that of the first and second seals. Alternatively, the additional side seals may be formed during another point in the manufacturing process. In addition, the additional side seals may be placed at varying distance from the first and second seals as needed.

Figs. 6-9 illustrate interlocking fastening strips of different configurations.

As shown in Fig. 6, the fastening strips may be U-channel fastening strips as described in U.S. Patent 4,829,641. U-channel fastening strips include a first fastening strip 430 with a first closure element 436 and a second fastening strip 431 with a second closure element 434. The first closure element 436 engages the second closure element 434. The first fastening strip 430 may include a flange 463 disposed at the upper end of the first fastening strip 430 and a rib 467 disposed at the lower end of the first fastening strip 430. The first fastening strip 430 may include a flange portion 469. Likewise, the second fastening strip 431 may include a flange 453 disposed at the upper end of the second fastening strip 431 and a rib 457 disposed at the lower end of the second fastening strip 431. The second fastening strip 431 may include a flange portion 459. The side walls 422, 423 of the plastic bag 420 may be attached to the fastening strips 430, 431 by conventional manufacturing techniques.

The second closure element 434 includes a base portion 438 having a pair of spaced-apart parallely disposed webs 440, 441, extending from the base portion 438. The base and the webs form a U-channel closure element. The webs 440, include hook closure portions 442, 444 extending from the webs 440, 441 respectively, and facing towards each other. The hook closure portions 442, 444 include guide surfaces 446, 447 which serve to guide the hook closure portions 442, 444 for occluding with the hook closure portions 452, 454 of the first closure element 436.

The first closure element 436 includes a base portion 448 including a pair of spaced-apart, parallely disposed webs

450, 451 extending from the base portion 448. The base and the webs form a U-channel closure element. The webs 450, 451 include hook closure portions 452, 454 extending from the webs 450, 451 respectively and facing away from each other. The hook closure portions 452, 454 include guide surfaces 445, 455, which generally serve to guide the hook closure portions 452, 454 for occlusion with the hook closure portions 442, 444 of the second closure element 434. The guide surfaces 445, 455 may also have a rounded crown surface.

The slider 432 includes a top portion 472. The top portion provides a separator 443 having a first end and a second end wherein the first end may be wider than the second end. In addition, the separator 443 may be triangular in shape. When the slider is moved in the occlusion direction, the separator 443 deoccludes the fastening strips 430, 431 as shown in Fig. 6. Referring to Fig. 6, the closure elements 434, 436 are deoccluded and specifically, the upper hook portions 442, 452 and the lower hook portions 444, 454 are deoccluded.

The interlocking fastening strips may comprise "arrowhead-type" or "rib and groove" fastening strips as shown in Fig. 7 and as described in U.S. Patent 3,806,998. The rib element 505 interlocks with the groove element 507. The rib element 505 is of generally arrow-shape in transverse cross section including a head 510 comprising interlock shoulder hook portions 511 and 512 generally convergently related to provide a cam ridge 513 generally aligned with a stem flange 514 by which the head is connected in spaced relation with respect to the supporting flange portion 508. (U.S. Patent 3,806,998, Col. 2, lines 16-23). At their

surfaces nearest the connecting stem flange 514, the shoulder portions 511 and 512 define reentrant angles therewith providing interlock hooks engageable with interlock hook flanges 515 and 517 respectively of the groove element 507. (U.S. Patent 3,806,998, Col. 2, lines 23-28). Said hook flanges generally converge toward one another and are spread open to receive the head 510 therebetween when said head is pressed into said groove element 507 until the head is fully received in a groove 518 of said groove element 507 generally complementary to the head and within which the head is interlocked by interengagement of the head shoulder hook portions 511 and 512 and the groove hook flanges 515 and 517. (U.S. Patent 3,806,998, Col. 2, lines 28-36). Through this arrangement, as indicated, the head and groove elements 505 and 507 are adapted to be interlockingly engaged by being pressed together and to be separated when forcably pulled apart, as by means of a generally U-shaped slider 519. (U.S. Patent 3,806,998, Col. 2, lines 36-41).

The slider 519 includes a flat back plate 520 adapted to run along free edges 521 on the upper ends of the sections of the flange portions 508 and 509 as shown in the drawing. (U.S. Patent 3,806,998, Col. 2, lines 41-46). Integrally formed with the back plate 520 and extending in the same direction (downwardly as shown) therefrom are respective coextensive side walls 522 with an intermediate spreader finger 523 extending in the same direction as the side walls at one end of the slider. (U.S. Patent 3,806,998, Col. 2, lines 46-51). The side walls 522 are in the form of panels which are laterally divergent from a narrower end of the slider. (U.S. Patent 3,806,998, Col. 2, lines 51-55). The slider walls 522 are each provided with an inwardly projecting shoulder structure 524 flange adapted to engage

respective shoulder ribs 525 and 527 on respectively outer sides of the lower section of the flange portions 508 and 509. (U.S. Patent 3,806,998, Col. 2, line 66 to Co. 3, line 3).

Additionally, the interlocking fastening strips may comprise "profile" fastening strips, as shown in Fig. 8 and described in U.S. Patent 5,664,299. As shown in FIG. 8, the first profile 616 has at least an uppermost closure element 616*a* and a bottommost closure element 616*b*. (U.S. Patent 5,664,299, Col. 3, lines 25-27). The closure elements 616*a* and 616*b* project laterally from the inner surface of strip 614. (U.S. Patent 5,664,299, Col. 3, lines 27-28). Likewise, the second profile 617 has at least an uppermost closure element 617*a* and a bottommost closure element 617*b*. (U.S. Patent 5,664,299, Col. 3, lines 28-30). The closure elements 617*a* and 617*b* project laterally from the inner surface of strip 615. (U.S. Patent 5,664,299, Col. 3, lines 30-32). When the bag is closed, the closure elements of profile 616 interlock with the corresponding closure elements of profile 617. (U.S. Patent 5,664,299, Col. 3, lines 32-34). As shown in FIG. 8, closure elements 616*a*, 616*b*, 617*a* and 617*b* have hooks on the ends of the closure elements, so that the profiles remain interlocked when the bag is closed, thereby forming a seal. (U.S. Patent 5,664,299, Col. 3, lines 34-37).

The straddling slider 610 comprises an inverted U-shaped member having a top 620 for moving along the top edges of the strips 614 and 615. (U.S. Patent 5,664,299, Col. 4, lines 1-3). The slider 610 has side walls 621 and 622 depending from the top 620. (U.S. Patent 5,664,299, Col. 4, lines 3-4). A separating leg 623 depends from the top 620

between the side walls 621 and 622 and is located between the uppermost closure elements 616*a* and 617*a* of profiles 616 and 617. (U.S. Patent 5,664,299, Col. 4, lines 26-30). The fastening assembly includes ridges 625 on the outer surfaces of the fastening strips 614 and 615, and shoulders 621*b* and 622*b* on the side walls of the slider. (U.S. Patent 5,664,299, Col. 4, lines 62-65). The shoulders act as means for maintaining the slider in straddling relation with the fastening strips by grasping the lower surfaces of the ridges 625. (U.S. Patent 5,664,299, Col. 5, lines 4-7).

Also, the interlocking fastening strips may be "rolling action" fastening strips as shown in Fig. 9 and described in U.S. Patent 5,007,143. The strips 714 and 715 include profiled tracks 718 and 719 extending along the length thereof parallel to the rib and groove elements 716 and 717 and the rib and groove elements 716, 717 have complimentary cross-sectional shapes such that they are closed by pressing the bottom of the elements together first and then rolling the elements to a closed position toward the top thereof. (U.S. Patent 5,007,143, Col. 4, line 62 to Col. 5, line 1). The rib element 716 is hook shaped and projects from the inner face of strip 714. (U.S. Patent 5,007,143, Col. 5, lines 1-3). The groove element 717 includes a lower hook-shaped projection 717*a* and a relatively straight projection 717*b* which extend from the inner face of strip 715. (U.S. Patent 5,007,143, Col. 5, lines 3-6). The profiled tracks 718 and 719 are inclined inwardly toward each other from their respective strips 714 and 715. (U.S. Patent 5,007,143, Col. 5, lines 6-8).

The straddling slider 710 comprises an inverted U-shaped plastic member having a back 720 for moving along the

top edges of the tracks 718 and 719 with side walls 721 and 722 depending therefrom for cooperating with the tracks and extending from an opening end of the slider to a closing end. (U.S. Patent 5,007,143, Col. 5, lines 26-31). A separator finger 723 depends from the back 720 between the side walls 721 and 722 and is inserted between the inclined tracks 718 and 719. (U.S. Patent 5,007,143, Col. 5, lines 34-36). The slider 710 has shoulders 721a and 722a projecting inwardly from the depending side walls 721 and 722 which are shaped throughout the length thereof for cooperation with the depending separator finger 723 in creating the rolling action in opening and closing the reclosable interlocking rib and groove profile elements 716 and 717. (U.S. Patent 5,007,143, Col. 5, lines 43-49).

Although several interlocking fastening strip embodiments have been specifically described and illustrated herein, it will be readily appreciated by those skilled in the art that other kinds, types, or forms of fastening strips may alternatively be used without departing from the scope or spirit of the present invention.

The interlocking fastening strips may be manufactured by extrusion through a die. The interlocking fastening strips may be formed from any suitable thermoplastic material including, for example, polyethylene, polypropylene, nylon, or the like, or from a combination thereof. Thus, resins or mixtures of resins such as high density polyethylene, medium density polyethylene, and low density polyethylene may be employed to prepare the interlocking fastening strips. For example, the fastening strips may be made from low density polyethylene.

When the fastening strips are used in a sealable bag, the fastening strips and the films that form the body of the bag may be conveniently manufactured from heat sealable material. In this way, the bag may be economically formed by using an aforementioned thermoplastic material and by heat sealing the fastening strips to the bag. For example, the bag may be made from a mixture of high pressure, low density polyethylene and linear, low density polyethylene.

The fastening strips may be manufactured by extrusion or other known methods. For example, the closure device may be manufactured as individual fastening strips for later attachment to the bag or may be manufactured integrally with the bag. In addition, the fastening strips may be manufactured with or without flange portions on one or both of the fastening strips depending upon the intended use of the fastening strips or expected additional manufacturing operations.

The fastening strips can be manufactured in a variety of forms to suit the intended use. The fastening strips may be integrally formed on the opposing sidewalls of the container or bag, or connected to the container by the use of any of many known methods. For example, a thermoelectric device may be applied to a film in contact with the flange portion of the fastening strips or the thermoelectric device may be applied to a film in contact with the base portion of fastening strips having no flange portion, to cause a transfer of heat through the film to produce melting at the interface of the film and a flange portion or base portion of the fastening strips. Suitable thermoelectric devices include heated rotary discs, traveling heater bands, resistance-heated slide wires, and the like. The connection

between the film and the fastening strips may also be established by the use of hot melt adhesives, hot jets of air to the interface, ultrasonic heating, or other known methods. The bonding of the fastening strips to the film stock may be carried out either before or after the film is U-folded to form the bag. In any event, such bonding may be done prior to side sealing the bag at the edges by conventional thermal cutting. In addition, the first and second fastening strips may be positioned on opposite sides of the film. Such an embodiment would be suited for wrapping an object or a collection of objects such as wires. The first and second fastening strips should usually be positioned on the film in a generally parallel relationship with respect to each other, although this will depend on the intended use.

The slider may be multiple parts and snapped together. In addition, the slider may be made from multiple parts and fused or welded together. The slider may also be a one piece construction. The slider can be colored, opaque, translucent or transparent. The slider may be injection molded or made by any other method. The slider may be molded from any suitable plastic material, such as, nylon, polypropylene, polystyrene, acetal, toughened acetal, polyketone, polybutylene terrephthalate, high density polyethylene, polycarbonate or ABS (acrylonitrile-butadiene-styrene).

From the foregoing it will be understood that modifications and variations may be effectuated to the disclosed structures – particularly in light of the foregoing teachings – without departing from the scope or spirit of the present invention. As such, no limitation with respect to the specific embodiments described and illustrated herein is intended or should be inferred. In addition, all references

and copending applications cited herein are hereby incorporated by reference in their entireties.

WHAT IS CLAIMED IS:

1. A container comprising:

a first sidewall and a second sidewall, said first sidewall includes a first fastening strip, said second sidewall includes a second fastening strip;

a first side seal to be disposed along a first edge of said first and second sidewalls for joining said sidewalls at said first edge;

a second side seal to be disposed along a second edge of said first and second sidewalls for joining said sidewalls at said second edge;

a third side seal to be disposed along said first side seal.

2. The invention as in claim 1 wherein the container includes a slider adapted to be slidably disposed on said fastening strips and facilitating the occlusion of said fastening strips when moved towards a first end thereof and facilitating the deocclusion of said fastening strips when moved towards a second end thereof.

3. The invention as in claim 1 having a longitudinal X axis and a transverse Y axis, said transverse Y axis being perpendicular to said longitudinal X axis, said container having a vertical Z axis, said vertical Z axis being perpendicular to said longitudinal X axis, said vertical Z axis being perpendicular to said transverse Y axis, said first and third side seals disposed parallel to said vertical Z axis.

4. The invention as in claim 1 wherein the container includes a fourth side seal to be disposed along said second side seal.

5. The invention as in claim 1 wherein the container includes a fifth side seal to be disposed along said first and third side seals.

6. The invention as in claim 4 wherein the container includes a fifth side seal to be disposed along said first and third side seals and a sixth side seal to be disposed along said second and fourth side seals.

7. The invention as in claim 1 wherein a gap is positioned between the first side seal and the third side seal.

8. The invention as in claim 4 wherein a first gap is positioned between the first side seal and the third side seal and a second gap is positioned between the second side seal and the fourth side seal.

9. The invention as in claim 1 wherein said side seals are manufactured by heat sealing.

10. The invention as in claim 1 wherein said side seals are manufactured by ultrasonic sealing.

11. The invention as in claim 1 wherein said side seals are manufactured using adhesives that attach the sidewalls together.

12. The invention as in claim 1 wherein said fastening strips comprise U-channel type fastening strips.

13. The invention as in claim 1 wherein said fastening strips comprise arrowhead type fastening strips.

14. The invention as in claim 1 wherein said fastening strips comprise profile type fastening strips.

15. The invention as in claim 1 wherein said fastening strips comprise rolling action type fastening strips.

16. A method of manufacturing a container comprising:

providing a first sidewall and a second sidewall, said first sidewall includes a first fastening strip, said second sidewall includes a second fastening strip;

providing a first side seal to be disposed along a first edge of said first and second sidewalls for joining said sidewalls at said first edge;

providing a second side seal to be disposed along a second edge of said first and second sidewalls for joining said sidewalls at said second edge;

providing a third side seal to be disposed along said first side seal.

17. The invention as in claim 16 wherein the container includes a slider adapted to be slidably disposed on said fastening strips and facilitating the occlusion of said fastening strips when moved towards a first end thereof and facilitating the deocclusion of said fastening strips when moved towards a second end thereof.

18. The invention as in claim 17 having a longitudinal X axis and a transverse Y axis, said transverse Y axis being perpendicular to said longitudinal X axis, said container having a vertical Z axis, said vertical Z axis being perpendicular to said longitudinal X axis, said vertical Z axis being perpendicular to said transverse Y axis, said first and third side seals disposed parallel to said vertical Z axis.

19. The invention as in claim 16 wherein the container includes a fourth side seal to be disposed along said second side seal.

20. The invention as in claim 16 wherein the container includes a fifth side seal to be disposed along said first and third side seals.

21. The invention as in claim 19 wherein the container includes a fifth side seal to be disposed along said first and third side seals and a sixth side seal to be disposed along said second and fourth side seals.

22. The invention as in claim 16 wherein a gap is positioned between the first side seal and the third side seal.

23. The invention as in claim 19 wherein a first gap is positioned between the first side seal and the third side seal and a second gap is positioned between the second side seal and the fourth side seal.

24. The invention as in claim 16 wherein said side seals are manufactured by heat sealing.

25. The invention as in claim 16 wherein said side seals are manufactured by ultrasonic sealing.

26. The invention as in claim 16 wherein said side seals are manufactured using adhesives that attach the sidewalls together.

27. The invention as in claim 16 wherein said fastening strips comprise U-channel type fastening strips.

28. The invention as in claim 16 wherein said fastening strips comprise arrowhead type fastening strips.

29. The invention as in claim 16 wherein said fastening strips comprise profile type fastening strips.

30. The invention as in claim 16 wherein said fastening strips comprise rolling action type fastening strips.

ABSTRACT OF THE DISCLOSURE

A container (100) includes a closure device (121). The closure device includes interlocking fastening strips (130, 131) and a slider (132) slidably disposed on the fastening strips for facilitating the occlusion and deocclusion of the fastening strips. The container includes first and second side seals (124, 125), and a third side seal (126). The third side seal (126) is provided for stronger sealing of the sidewalls (122, 123) and to further prevent forced separation of the sidewalls. The container may include fourth, fifth, and sixth side seals (227, 228, 229) for further facilitating the strength of the container. The side seals may be accomplished by heat sealing, ultrasonic sealing or adhesives that attach the sidewalls together.

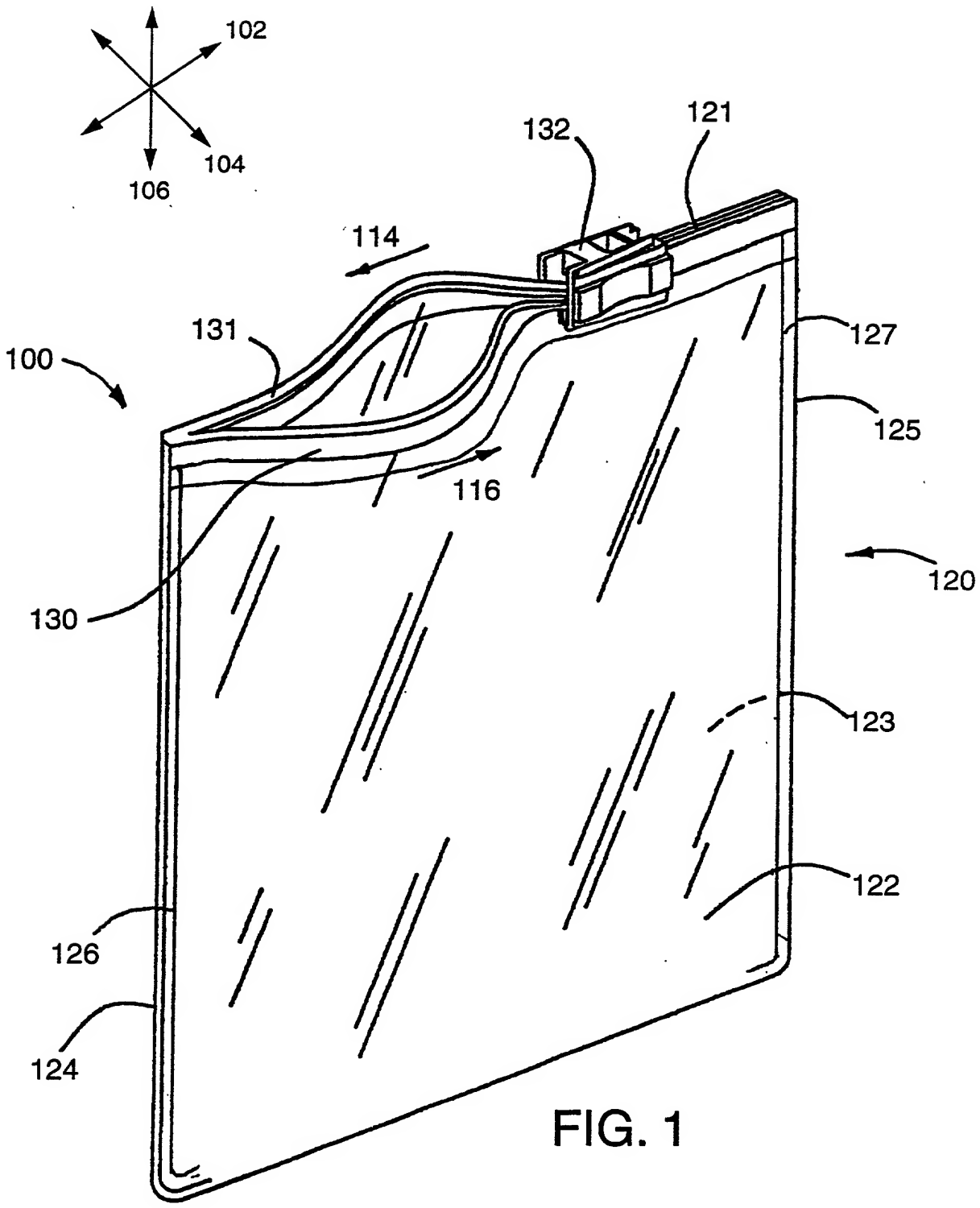


FIG. 1

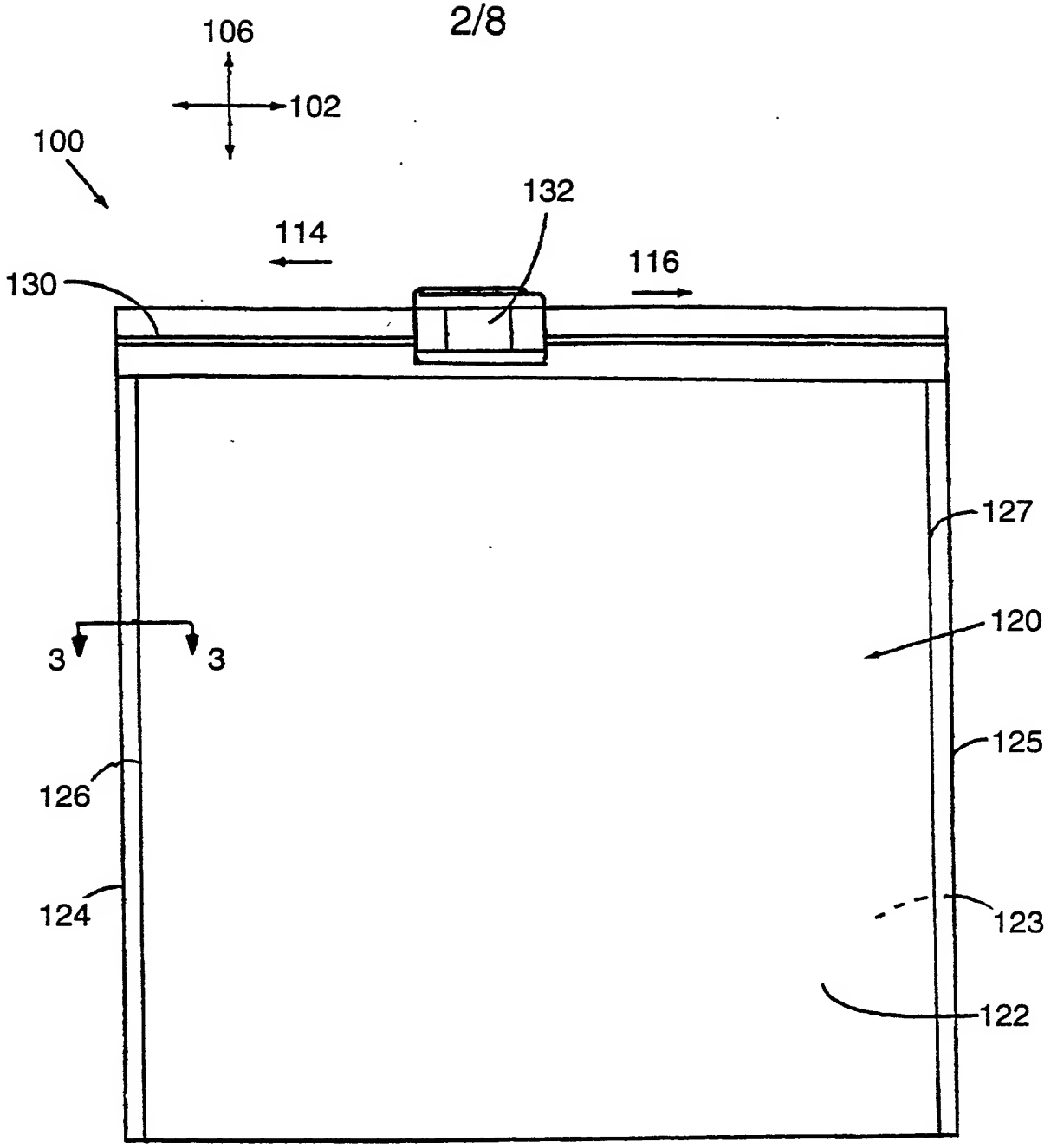


FIG. 2

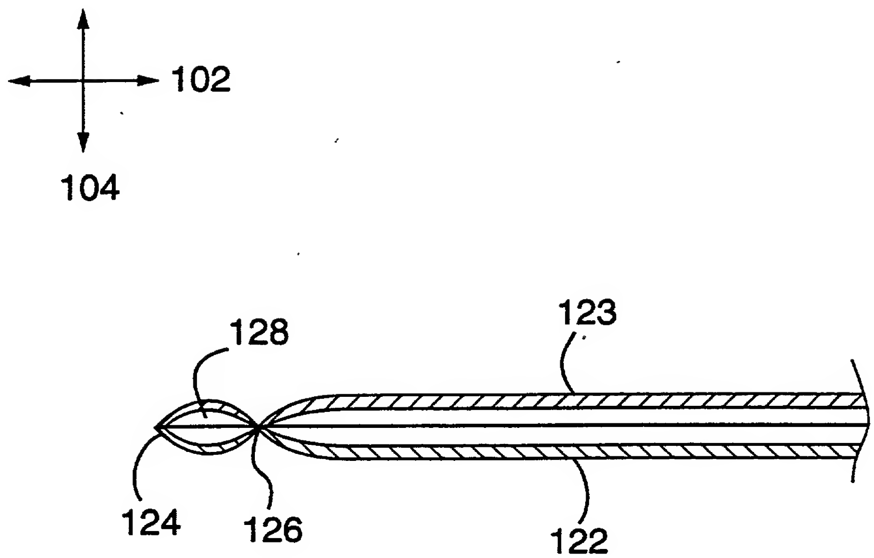


FIG. 3

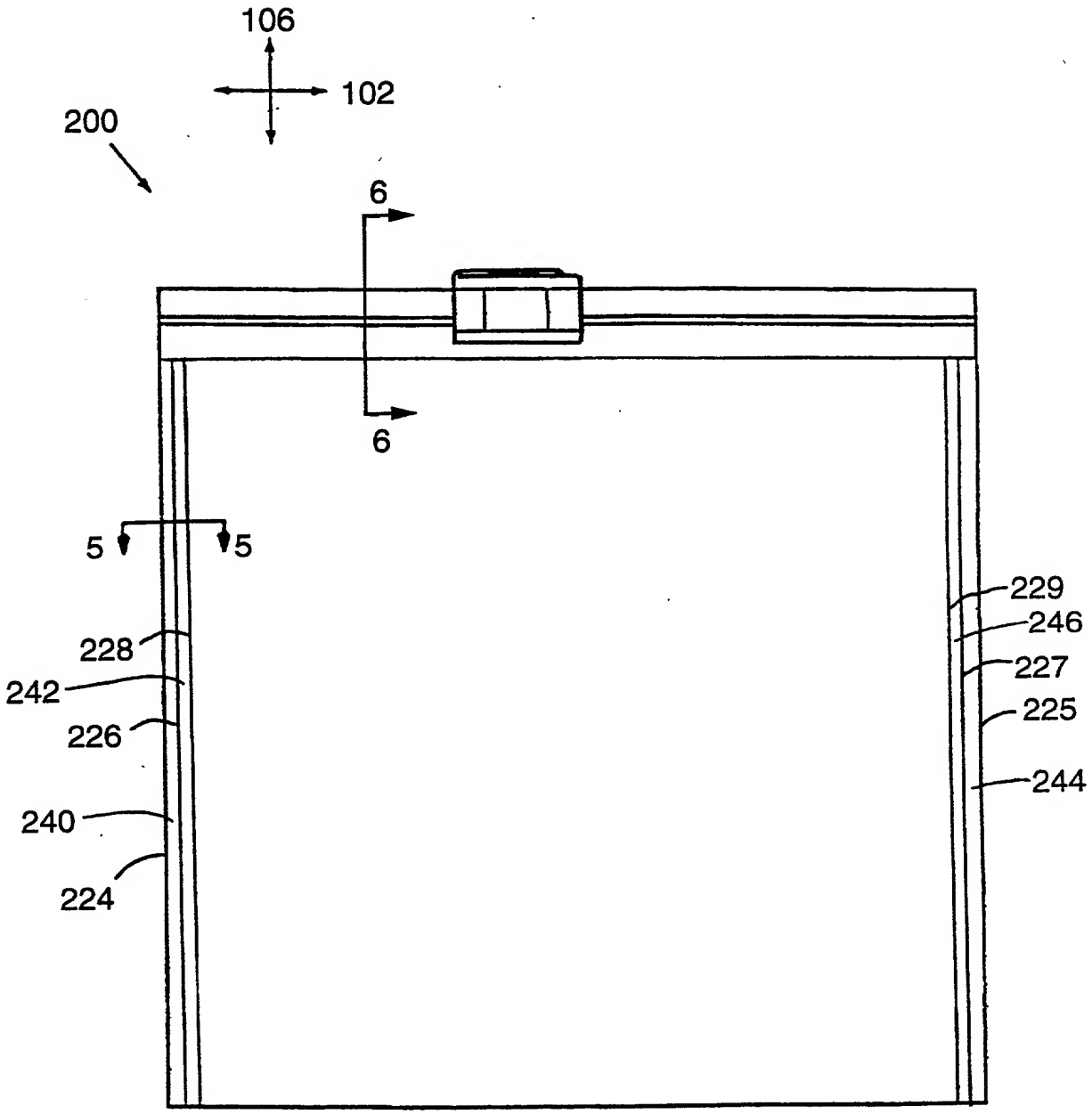


FIG. 4

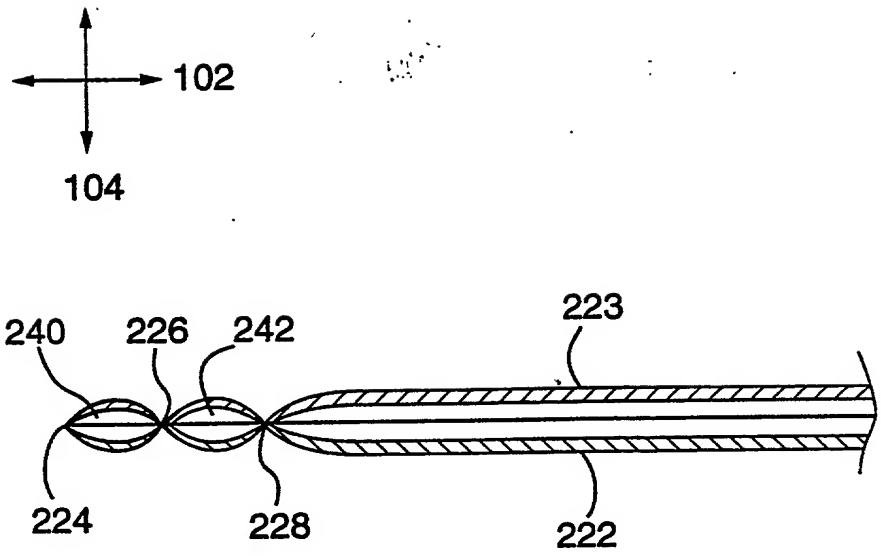
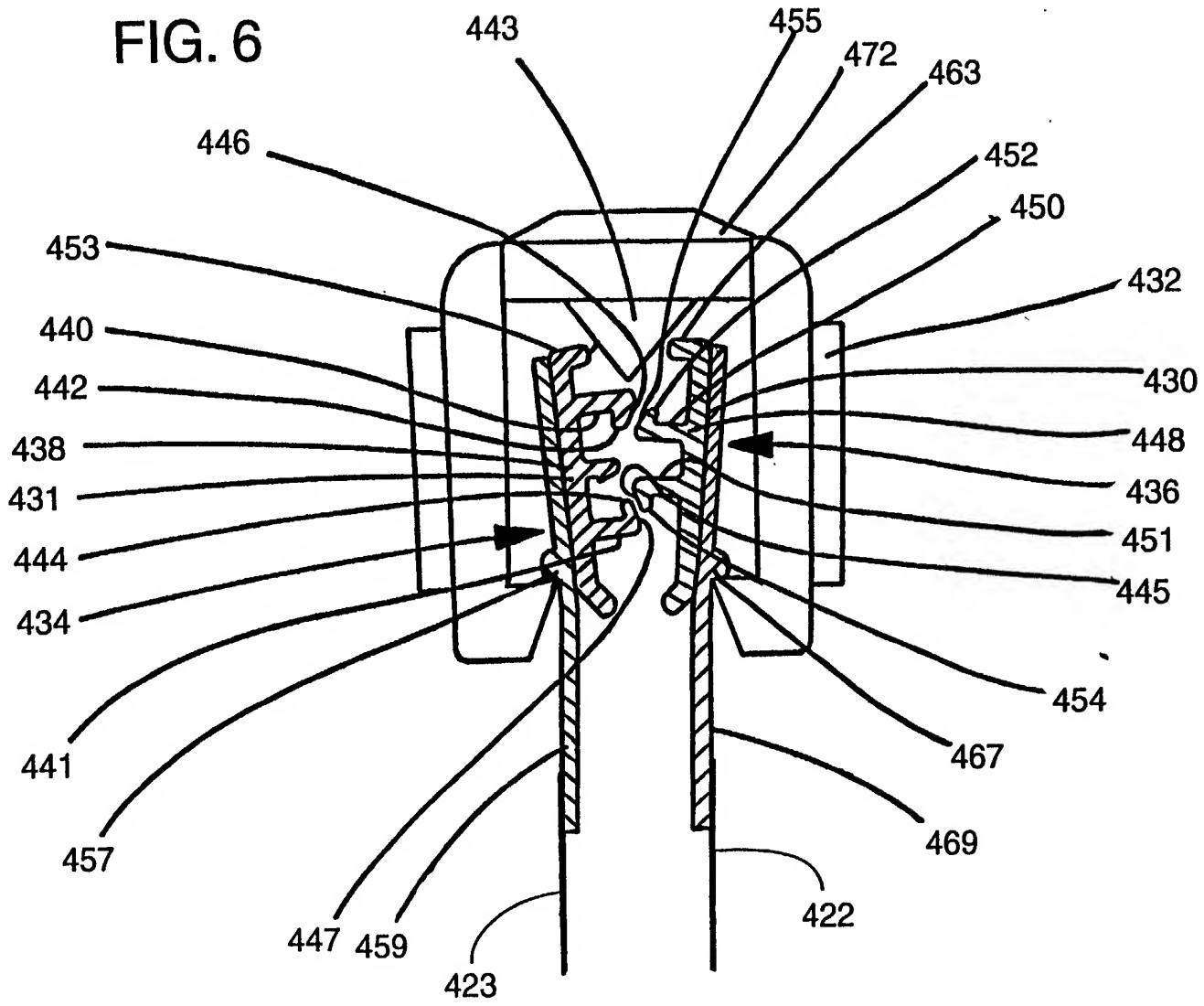


FIG. 5

FIG. 6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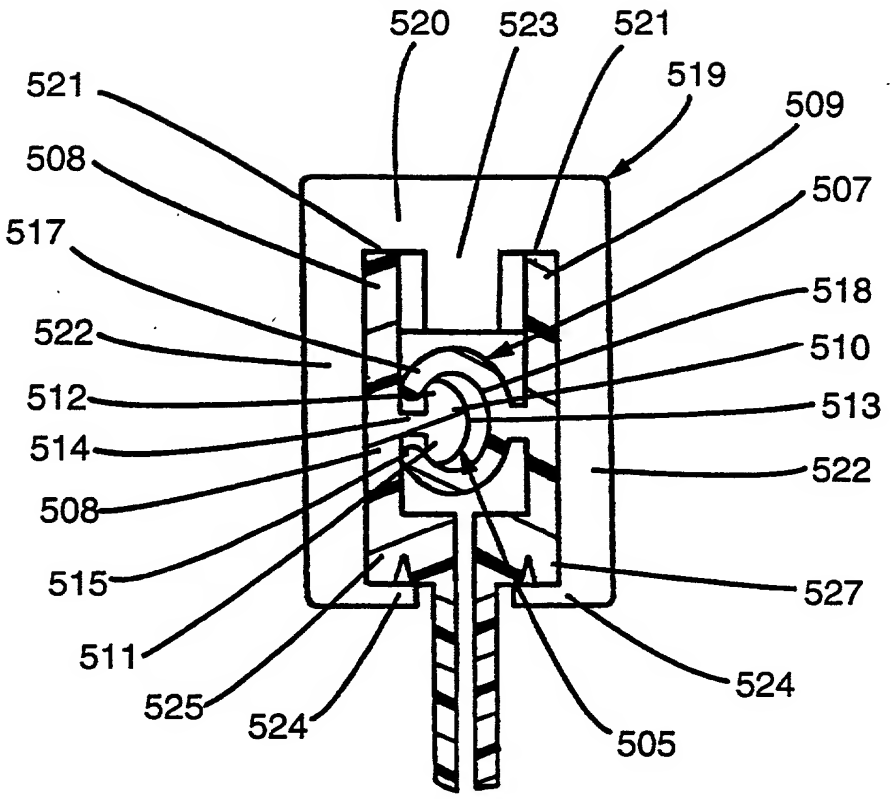

FIG. 7

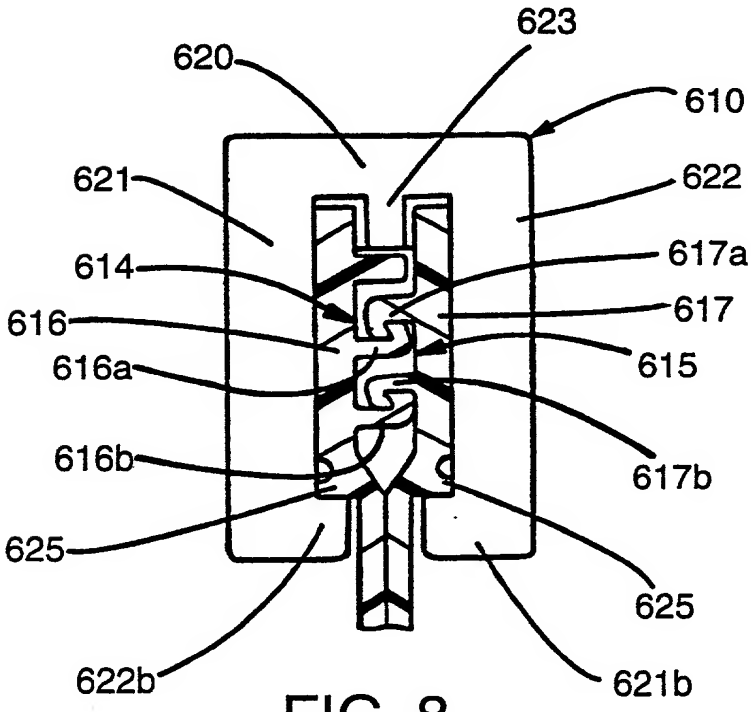

FIG. 8

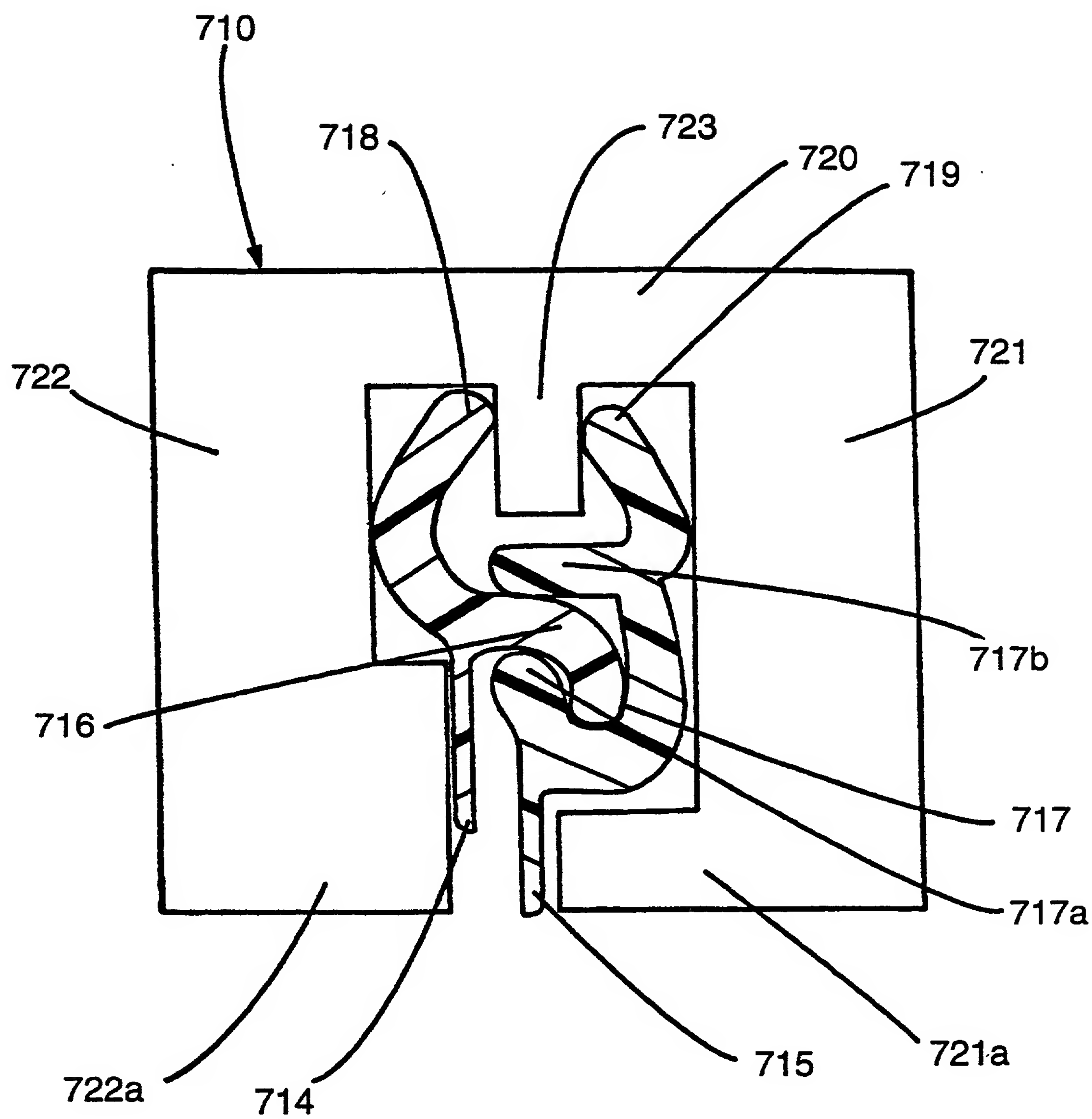

FIG. 9

COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is for a national stage of PCT application.

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am an original, first and joint inventor of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

CONTAINER WITH CLOSURE DEVICE AND MULTIPLE SIDE SEALS

SPECIFICATION IDENTIFICATION

The specification was described and claimed in PCT International Application No. PCT/US00/40121, filed on June 6, 2000.

SUPPLEMENTAL DECLARATION (37 C.F.R. SECTION 1.67(b))

I hereby declare that the subject matter of the attached amendment was part of my/our invention and was invented before the filing date of the original application, above identified, for such invention.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, Section 1.56, and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and in compliance with this duty, there is attached an information disclosure statement, in accordance with 37 C.F.R. Section 1.98.

ALL FOREIGN APPLICATION(S), *IF ANY,* FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

PCT/US00/40121

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S) UNDER 35 U.S.C. SECTION 120

I hereby claim the benefit, under Title 35, United States Code, Section 120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose information that occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. SECTION 120:

U.S. APPLICATIONS — Status

U.S. APPLICATIONS	U.S. FILING DATE	Patented	Pending	Abandoned
PCT APPLICATION DESIGNATING THE U.S.				
PCT APPLICATION NO.	PCT FILING DATE	U.S. APPLICATION NOS. ASSIGNED (IF ANY)		
PCT/US00/40121	6 JUN 00			

POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

APPOINTED PRACTITIONER(S)	REGISTRATION NUMBER(S)
Thomas C. Feix	34,592
Joel J. Hayashida	30,765
Mazza J. Mazza	30,775

I hereby appoint the practitioner(s) associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

SEND CORRESPONDENCE TO

Thomas C. Feix
P.O. Box 24305
Oakland, CA 94623-1305

Customer Number 27023

DIRECT TELEPHONE CALLS TO:

Thomas C. Feix
510-271-7416

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

1-10

Alan F. Savicki

Inventor's signature Alan F. Savicki

Date 2/09/02 **Country of Citizenship** US

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